

CLAIMS:

1. An ionically complexed black colorant compound, comprising
 - a) a first ionic dye component having a known color characteristic that
5 absorbs light in at least a portion of the visible light spectrum; and
 - b) a second ionic dye component having a known color characteristic that
absorbs light in at least a portion of the visible light spectrum that is not absorbed by the
first ionic dye component;
wherein the first ionic dye component and the second ionic dye component are
10 complexed together to form an ionically complexed colorant compound that appears
black in color.
2. The ionically complexed colorant compound of claim 1, wherein the first ionic
dye component and the second ionic dye component are oppositely charged ions.
15
3. The ionically complexed colorant compound of claim 1, wherein the first ionic
dye component and the second ionic dye component have the same charge, and are
ionically complexed with a colorless counterion component.
- 20 4. The ionically complexed colorant compound of claim 3, wherein the first ionic
dye component and the second ionic dye component are anionic dye components.
5. The ionically complexed colorant compound of claim 3, wherein the first ionic
dye component and the second ionic dye component are cationic dye components.
25
6. The ionically complexed colorant compound of claim 1, wherein at least one of
the dye components comprises a plurality of ionic functionalities.
7. An ionically complexed black colorant compound, comprising
 - a) a first ionic dye component having a known color characteristic that
30 absorbs light in at least a portion of the visible light spectrum; and

- b) a plurality of additional ionic dye components having known color characteristics that in combination absorb light in at least a portion of the visible light spectrum that is not absorbed by the first ionic dye component, wherein the first ionic dye component and the additional ionic dye components are complexed together to form an ionically complexed colorant compound that appears black in color.
- 5
8. The ionically complexed colorant compound of claim 7, wherein the first ionic dye component comprises a plurality of ionic functionalities, and the additional ionic dye components are of opposite charge of the ionic functionalities of the first ionic dye component, and the additional ionic dye components are ionically complexed with the ionic functionalities of the first ionic dye component.
- 10
9. The ionically complexed colorant compound of claim 1, wherein the compound has a water solubility of less than 100 parts per million.
- 15
10. The ionically complexed colorant compound of claim 1, wherein the compound is substantially free of metal that is not covalently bound to the colorant compound.
11. The ionically complexed colorant compound of claim 1, wherein the compound has a molecular weight of less than about 5000 Daltons.
- 20
12. The ionically complexed colorant compound of claim 1, wherein the compound has a molecular weight of less than about 3000 Daltons.
- 25
13. An ionically complexed black colorant composition comprising
- a) a first ionic dye component having a known color characteristic that absorbs light in at least a portion of the visible light spectrum; and
- b) a second ionic dye component having a known color characteristic that absorbs light in at least a portion of the visible light spectrum that is not absorbed by the first ionic dye component;
- 30

wherein the first ionic dye component and the second ionic dye component are complexed to form ionically complexed compounds that together in a colorant composition appear black in color.

5 14. The ionically complexed colorant composition of claim 13, wherein the composition further comprises a colorless ionic component that is capable of coordinating with either the first ionic dye component and/or the second ionic dye component.

10 15. An ionically complexed black colorant composition, comprising
a) a first ionic dye component having a known color characteristic that absorbs light in at least a portion of the visible light spectrum; and
b) a plurality of additional ionic dye components having known color characteristics that in combination absorb light in at least a portion of the visible light
15 spectrum that is not absorbed by the first ionic dye component;
wherein the first ionic dye component and the additional ionic dye components are complexed to form ionically complexed compounds that together in a colorant composition appear black in color.

20 16. A method of preparing an ionically complexed black colorant compound, comprising
a) identifying a first ionic dye component having an apparent color characteristic that absorbs light in at least a portion of the visible light spectrum;
b) determining the components of the visible light spectrum that are not
25 absorbed by the first ionic dye component;
c) based on the information determined in step b), identifying a second ionic dye component having a known color characteristic that absorbs light in at least a portion of the visible light spectrum that is not absorbed by the first ionic dye component, such that the combination of the first ionic dye component and the second ionic dye
30 component absorbs sufficient amounts of the light wavelength spectrum to appear black in color; and

d) complexing the first ionic dye component with the second ionic dye component to form an ionically complexed colorant compound composition that appears black in color.

5 17. A method of preparing an ionically complexed black colorant compound, comprising

a) identifying a first ionic dye component having an apparent color characteristic that absorbs light in at least a portion of the visible light spectrum;

10 b) determining the components of the visible light spectrum that are not absorbed by the first ionic dye component;

c) based on the information determined in step b), identifying a plurality of additional ionic dye components having known color characteristics that in combination absorb light in at least a portion of the visible light spectrum that is not absorbed by the first ionic dye component, such that the combination of the first ionic dye component and the additional ionic dye components absorbs sufficient amounts of the light wavelength spectrum to appear black in color; and

15 d) complexing the first ionic dye component with the additional ionic dye components to form an ionically complexed colorant compound composition that appears black in color.

20

18. A method of preparing an ionically complexed black colorant composition, comprising

a) identifying a first ionic dye component having an apparent color characteristic that absorbs light in at least a portion of the visible light spectrum;

25 b) determining the components of the visible light spectrum that are not absorbed by the first ionic dye component;

c) based on the information determined in step b), identifying a second ionic dye component having a known color characteristic that absorbs light in at least a portion of the visible light spectrum that is not absorbed by the first ionic dye component, such that the combination of the first ionic dye component and the second ionic dye

30

component absorbs sufficient amounts of the light wavelength spectrum to appear black in color; and

- 5 d) complexing the first ionic dye component and the second ionic dye component to form ionically complexed compounds that together in a colorant composition appear black in color.

19. A coatable colorant composition comprising the black colorant of claim 1.

10 20. The coatable colorant composition of claim 19, wherein the composition is a latex paint.

21. A toner composition comprising the black colorant of claim 1.

15 22. The toner composition of claim 21, wherein the toner comprises an amphipathic polymer.

23. An ink composition comprising the black colorant of claim 1.

20 24. A color pre-concentrate composition comprising the black colorant of claim 1.

25. A method of printing an image, comprising electrographically printing a toner of claim 21.